

ABSTRACT OF THE DISCLOSURE

A screw type processing device provides a film-formable thermoplastic composition formed mainly of polysaccharide and protein by continuously compressing substances together with carbon dioxide gas to form fluid in a critical state, processes the fluid and is capable of efficiently manufacturing a practicable polyester foam body. A pressure reduction part with increased space volume between screw vanes is formed continuously with an extruding screw of a material supply part by reducing the diameter of the shaft of the screw, and carbon dioxide gas is led into the pressure reduction part. Also, a compression part formed of a screw having a shaft with increased diameter and narrowed vanes is positioned after the pressure reduction part. The diameter of the shaft is made substantially equal to the inner periphery of a barrel, and an orifice part having an orifice formed on the surface or periphery of the shaft is formed. The maximum flow velocity of orifice passing substances is desirably designed to be 10 to 1500 cm/sec.